

IS 5465 : 2013

(Reaffirmed 2019)

भारतीय मानक
सोनाली छाल — विशिष्टि
(पहला पुनरीक्षण)

Indian Standard
SONALI BARK — SPECIFICATION
(*First Revision*)

ICS 59.140.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

October 2012

Price Group 2

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Leather, Tanning Materials and Allied Products Sectional Committee had been approved by the Chemical Division Council.

SONALI or *SONARI* (*Cassia fistula* Linn.) is a moderate sized deciduous tree with a rather open crown, found in deciduous forests throughout the greater part of India (ascending to 1 200 m in the Himalayas), Myanmar and Sri Lanka. *Sonali* being a deciduous tree is never found along with ever green species, but confined to deciduous forest only. The tree is one of the most beautiful flowering trees of India. The vernacular names are *AMALTAS* (Hindi), *SONALI* (Bengali),

SANARU (Assam), *SONALU* (Nepali), *SONARI* (Oriya), *BAHAWA* (Marathi), *KAKKE* (Kanarese), *KONNAI* or *KONNAM* (Tamil), and *RELA* (Telugu). The bark is about 0.65 cm thick in younger trees, smooth, light grey of reddish brown exfoliating in hard scales.

The *SONALI* bark may be used alone or in conjunction with *BABUL* [*Acacia nilotica* (Linn.) Del], *GORAN* [*Ceriops decandra* (Griff) Ding Hon-Syn. *Ceriops roxburghiana* Arn., fam. Rhizophoraceae], *Myrobalans* (*Terminulia chebula* Retz.) and other types of tannins. The bark is highly astringent and belongs to the condensed (catechol) type of tannin. Due to its lighter colouring properties, this may be used for the manufacture of upholstery and light coloured lining leathers. The leather produced with *SONALI* bark possesses smooth grain, very pale almost white colour. However, since the penetration power of this bark infusions is comparatively low, it is often used as a blend with other barks, like *BABUL* and *AVARAM*. Further, on account of its low tan-content and lower tan-nontan ratio, it is not economical for extract manufacture as such but extract can profitably be manufactured when blended with *GORAN* or *AVARAM*.

This standard was originally published in 1969. In this revision, the requirement on pentachlorophenol (PCP) has been introduced keeping in view of the demand for eco-friendly inputs from the leather industry.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SONALI BARK — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for *SONALI* bark intended for tanning and for the use in the manufacture of blended tanning extract.

2 REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

<i>IS No.</i>	<i>Title</i>
1640 : 2007	Glossary of terms relating to hides, skins and leather (<i>first revision</i>)
5466 : 1969	Methods of test for vegetable tanning materials

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 1640 shall apply.

4 REQUIREMENTS

4.1 Material

The material shall be the bark of *SONALI* tree, *Cassia fistula* Linn., properly collected and dried in shade.

4.2 The material shall also comply with the requirements given in Table 1, when tested according to the methods given in col 4 of Table 1.

5 PACKING AND MARKING

5.1 Packing

Unless otherwise agreed to between the purchaser and the supplier the *SONALI* bark shall be packed in fairly light-proof containers like gunny bags.

5.2 Marking

Packages shall be marked on the outside with the following information:

- a) Name of the material;
- b) Net mass of the material;

- c) Supplier's name or recognized trade-mark, if any; and
- d) Date of packing.

5.2.1 BIS Certification Marking

The containers may also be marked with the Standard Mark.

5.2.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standard Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Table 1 Requirements for *SONALI* Bark
Characteristic Requirement
(Clause 4.2)

Sl No.	Characteristic	Requirement	Method of Test, Ref to Cl of IS 5466
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	15	6
ii)	Non-tans ¹⁾ , percent by mass, <i>Max</i>	13	9
iii)	Tannins ¹⁾ , percent by mass, <i>Min</i>	12	10
iv)	pH of analytical strength solution, <i>Min</i>	4.5	12
v)	Colour:		13
	a) Red, <i>Max</i>	5	—
	b) Yellow/red, <i>Min</i>	2	—
vi)	PCP content ¹⁾ , mg/kg, <i>Max</i>	5	16

¹⁾ Calculated on moisture-free basis.

6 SAMPLING AND CRITERIA FOR CONFORMITY

6.1 Representative samples of the material shall be drawn in accordance with Annex A and their conformity to the requirements of this standard shall be judged as follows.

6.2 Number of Tests

Each test sample in the set shall be tested individually for all the requirements of this standard.

6.3 Criterion for Conformity

The lot shall be declared to conform to the requirements of this standard if each test sample in the set passes all the tests.

ANNEX A

(Clause 6.1)

SAMPLING OF SONALI BARK

A-1 SCALE OF SAMPLING

A-1.1 Lot

In a single consignment all the *SONALI* bark of the same form of cutting, collected and dried under similar conditions, shall constitute one lot.

A-1.2 For ascertaining the conformity of the material to the requirements of this standard, each lot shall be considered separately. The number of packages to be selected for this purpose shall depend on the size of the lot and shall be in accordance with Table 2.

A-1.3 The packages shall be selected at random from the lot. To ensure randomness of selection, random number tables (*see* IS 4905) shall be used. In case, random number tables are not available, the following procedure may be adopted:

Starting from any package, count all the packages in the lot as 1, 2, 3,... etc, up to r and so on where r is the integral part of N/n where N is the number of packages in the lot and n the number to be sampled. Every r th container thus counted shall be withdrawn to constitute the sample.

A-2 PREPARATION OF SAMPLES

A-2.1 From each of the packages selected according to **A-1.2** small portions of the material shall be taken from different parts so as to obtain a most representative sample of the package. The total quantity of the material taken from a package shall be at least three times the quantity needed for carrying out all the tests.

Table 2 Number of Packages to be Sampled
Number of Packages in the Lot
(Clause A-1.2)

Sl No. (1)	No. of Packages in the Lot (2)	No. of Packages to be Sampled (3)
i)	Up to 25	3
ii)	26 to 50	4
iii)	51 to 150	5
iv)	151 to 300	6
v)	301 to 500	7
vi)	501 to 1 000	8
vii)	1 001 and above	9

A-2.2 The material obtained from each package in **A-2.1** shall be divided into three equal parts each forming a test sample representing the package. One set of these samples, each representing a selected package shall be marked for the purchaser, another for the supplier and the third set kept as a referee sample.

A-2.3 All the test samples shall be immediately transferred to separate sample containers and shall be sealed air-tight and marked with full particulars necessary for proper identification, such as name of the supplier, place and date of packing, year of production, lot number, date of sampling, name of sampler, etc.

A-2.4 The referee sample consisting of a set of test samples shall bear the seal of both the supplier and the purchaser and shall be kept at a place till such time and under conditions agreed to between the two for use in case of disputes.

ANNEX B*(Foreword)***COMMITTEE COMPOSITION**

Leather, Tanning Materials and Allied Products Sectional Committee, CHD 17

<i>Organization</i>	<i>Representative(s)</i>
Central Leather Research Institute, Chennai	DIRECTOR (Chairman)
A. V. Thomas Leather & Allied Products Pvt Ltd, Chennai	SHRI HABIB HUSSAIN SHRI K. MANIVANNAN (<i>Alternate</i>)
All India Skins & Hide Tanners and Merchants Association, Chennai	SHRI MOHAN M. SREENIVAS SHRI S. MOHAMMED HASSAN (<i>Alternate</i>)
BASF India Ltd, Mumbai	SHRI P. R. CHAUDHARI DR S. A. NADGOUDA (<i>Alternate</i>)
Bata India Ltd, Hathidah	DR SUDHIR KUMAR DAS
Central Footwear Training Institute, Agra	SHRI S. N. GANGULY SHRI S. CHAKRABORTY (<i>Alternate</i>)
Central Leather Research Institute, Chennai	DR C. MURALIDHARAN
Central Pollution Control Board, Delhi	SHRI T. VENUGOPAL SHRI AJAY AGGARWAL (<i>Alternate</i>)
College of Leather Technology, Kolkata	DR BUDDHADEV CHATTOPADHYAY PROF SWAPAN KUMAR BASU (<i>Alternate</i>)
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Council for Leather Exports, Chennai	SHRI M. M. HASHIM DR ZACKRIA SAIT (<i>Alternate</i>)
Directorate General of Quality Assurance (DGQA), Kanpur	SHRI G. C. KANNAUJIA SHRI S. CHAKRABORTY (<i>Alternate</i>)
Footwear Design & Development Institute, Noida	SHRI B. S. KATIYAR SHRI NAVENDU SHEKHAR (<i>Alternate</i>)
Harman Sales Pvt Ltd, Mumbai	SHRI H. K. RAZDAN SHRI JEEVAN RAZDAN (<i>Alternate</i>)
Indian Finished Leather Manufacturers & Exporters Association, Chennai	SHRI SHAFEEQUE AHMED SHRI V. P. NAIMMUR RAHMAN (<i>Alternate I</i>) SHRI M. SALAHUDDIN BARI (<i>Alternate II</i>)
Indian Footwear Component Manufacturers Association, Kolkata	SHRI MANI ALMAL
Indian Leather Products Association, Kolkata	REPRESENTATIVE
Indian Leather Technologists Association, Kolkata	SHRI ARNAB JHA DR GAUTAM MUKHERJEE (<i>Alternate</i>)
Indian Shoe Federation, Chennai	SHRI RAMESH SUBRAMANIAM SHRI ABHIJIT SETH (<i>Alternate</i>)
Indofil Chemicals Co Ltd, Mumbai	SHRI S. K. JHA
International Institute of Saddlery Technology and Export Management, Kanpur	REPRESENTATIVE
Italab Private Ltd, Chennai	SHRI M. A. ETIAPPAN SHRI J. J. PATEL (<i>Alternate</i>)
Khadi & Village Industries Commission, Mumbai	SHRI S. VIJAYA KUMAR SHRI R. LAWRENCE (<i>Alternate</i>)
Kings International Ltd, Kanpur	SHRI TAJ ALAM SHRI G. S. KUMARAN (<i>Alternate</i>)
Leather Chemicals Manufacturers Association, Mumbai	SHRI VADUVUR T. SRIKANTH SHRI SANJEEV MEHTA (<i>Alternate</i>)
Liberty Footwear, Karnal	SHRI ADESH GUPTA SHRI S. S. LAHIRI (<i>Alternate</i>)
Ministry of Commerce, New Delhi	REPRESENTATIVE

IS 5465 : 2013

<i>Organization</i>	<i>Representative(s)</i>
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National Institute of Fashion Technology, New Delhi	SHRI E. SIVASAKTHI
Office of the Development Commissioner, MSME, New Delhi	SHRI S. K. BASU SHRI R. K. KAPOOR (<i>Alternate</i>)
Planning Commission, New Delhi	DR S. C. LAHIRI
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BIS Directorate General	Scientist 'F' and Head (CHD) [Representing Director General (<i>Ex-officio</i>)]
<i>Member Secretary</i> SHRI E. DEVENDAR Scientist 'F' and Head (CHD), BIS	

Bureau of Indian Standards

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This Indian Standard has been developed from Doc No.: CHD 17 (1647).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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